

ABSTRACT

A method for synthesizing noise in a digital image comprises the steps of (a) estimating noise statistics based on a set of spatial autocorrelation coefficients and a set of spectral correlation coefficients that correspond to the

5 color channels of the image, where at least one of the spatial autocorrelation coefficients is weighted by at least one of the spectral correlation coefficients, thereby providing a weighted set of autocorrelation coefficients, and where a set of filter coefficients is obtained from the weighted set of autocorrelation coefficients; and (b) synthesizing a synthetic texture by using the filter

10 coefficients to filter a random noise field in each of the color channels, thereby producing output noise fields in each of the color channels that replicate a synthetic texture, e.g., a desired grain appearance, when combined into the digital image.